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**Open-ended Working Group of the Parties to
the Montreal Protocol on Substances that
Deplete the Ozone Layer**

Thirty-seventh meeting

Geneva, 4–8 April 2016

Item 4 (b) of the provisional agenda*

**Dubai pathway on hydrofluorocarbons (HFCs) (decision
XXVII/1): ways of managing HFCs, including the
amendment proposals submitted by parties
(UNEP/OzL.Pro.27/5, UNEP/OzL.Pro.27/6,
UNEP/OzL.Pro.27/7 and UNEP/OzL.Pro.27/8)**

**Proposed amendment to the Montreal Protocol on Substances
that Deplete the Ozone Layer submitted by Kiribati, the
Marshall Islands, Mauritius, the Federated States of
Micronesia, Palau, the Philippines, Samoa and Solomon Islands**

Note by the Secretariat

1. Pursuant to article 9, paragraph 2, of the Vienna Convention for the Protection of the Ozone Layer, the Secretariat is circulating a proposal to amend the Montreal Protocol on Substances that Deplete the Ozone Layer in respect of hydrofluorocarbons submitted by Kiribati, the Marshall Islands, Mauritius, the Federated States of Micronesia, Palau, the Philippines, Samoa and Solomon Islands (see annex). The proposal is being circulated as submitted, without formal editing by the Secretariat.
2. The amendment proposal, as set out in document UNEP/OzL.Pro.27/8, along with three other proposals to amend the Protocol in respect of HFCs submitted by Canada, Mexico and the United States of America (UNEP/OzL.Pro.27/5), India (UNEP/OzL.Pro.27/6), and the European Union and its member States (UNEP/OzL.Pro.27/7), was discussed by the Twenty-Seventh Meeting of the Parties, which decided, in decision XXVII/1, that consideration of the amendment proposals would continue at meetings of the parties and meetings of the Open-ended Working Group to be held in 2016.

* UNEP/OzL.Pro.WG.1/37/1.

Annex

Island States^{*} Proposed Amendment to Phase Down HFCs under the Montreal Protocol

INTRODUCTION

Production, consumption and emissions of hydrofluorocarbons (HFCs)—greenhouse gases hundreds to thousands of times more potent in their warming impact than carbon dioxide—are expected to grow rapidly over the next several decades. This amendment to the Montreal Protocol would constrain the growth of HFCs through a gradual phase down of their production and consumption. This amendment would also limit by-product emissions of HFC-23.

KEY ELEMENTS OF THE AMENDMENT PROPOSAL

- Establishes differentiated HFC baselines for Non-Article 5 (Non-A5) and Article 5 (A5) Parties:
 - **Non-A5 Baseline:** the average of its calculated levels of consumption in [2011, 2012, and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances.
 - **A5 Baseline:** the average of its calculated levels of consumption of Annex F, Group I controlled substances in [2015, 2016 and 2017] plus sixty-five percent of the baseline of Annex C, Group I controlled substances.
- Establishes differentiated HFC phase down schedules for Article 2 and Article 5 Parties:

Non-A5 Parties		A5 Parties	
100% HFC 2011-2013 + 10% HCFC Baseline		100% HFC 2015-2017 + 65% HCFC Baseline	
2017	85%	2020	85%
2021	65%	2025	65%
2025	45%	2030	45%
2029	25%	2035	25%
2033	10%	2040	10%

- The HFC phase down schedule for Article 5 Parties coincides with the remaining reduction steps under the accelerated HCFC phase-out—2020, 2025, 2030—to capture synergies and efficiencies through a coordinated approach under the HCFC Phase-Out Management Plan (HPMP) process.
- A5 Parties that begin implementation of the HFC phase down in advance of the schedule would still be eligible for funding of their implementation under Article 10 of the Protocol.
- The financial mechanism is further strengthened to promote energy-efficient technologies with low global warming potentials (GWPs) and to overcome barriers to the uptake of those technologies, e.g. training of technicians and equipment support in the servicing sector, demonstration and pilot projects of low-GWP and not-in-kind technologies, and revision of antiquated safety standards and legislation.

^{*} Kiribati, Marshall Islands, Mauritius, Micronesia (Federated States of), Palau, Philippines, Samoa and Solomon Islands

CONSISTENCY WITH RELATED CONVENTIONS AND MULTILATERAL AGREEMENTS

This amendment is not only consistent with the principles and objectives of the Vienna Convention and the Montreal Protocol, but is also consistent with the principles and objectives of the United Nations Framework Convention on Climate Change, including its ultimate objective and its principle of common but differentiated responsibilities and respective capabilities:

- By reducing the amount of HFCs produced and consumed, this amendment would complement the ultimate objective of the UNFCCC, as stated in its Article 2, to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.
- Action taken under this amendment would be led by developed country parties, and then followed later in time by similar actions taken by developing country parties, consistent with Article 3.1 of the UNFCCC.
- Developed country parties would provide, through financial contributions to the Multilateral Fund, the means of implementation for the "agreed full incremental costs" of actions to be undertaken by developing country parties, consistent with Article 4.3 of the UNFCCC.
- By reducing the amount of HFCs produced and consumed, this amendment would further complement the Kyoto Protocol and any future emissions control regime. However, this amendment, as per its Section III, would have no effect on the status of HFCs under the Kyoto Protocol, nor would it affect the opportunities of Parties to the Kyoto Protocol to meet their commitments under that treaty by reducing HFC emissions.

Text of Island States' Proposed Amendment to Phase Down HFCs under the Montreal Protocol

SECTION I: AMENDMENT

Article 1, paragraph 4

In paragraph 4 of Article 1 of the Protocol, for the words:

“Annex C or Annex E”

There shall be substituted:

“Annex C, Annex E or Annex F”

Article 1, paragraphs 9 and 10

The following paragraphs shall be inserted after paragraph 8 of Article 1 of the Protocol:

9. “UNFCCC” means the United Nations Framework Convention on Climate Change, adopted on 9 May 1992.

10. “Kyoto Protocol” means the Kyoto Protocol to the UNFCCC, adopted 11 December 1997.

Article 2, paragraph 5

In paragraph 5 of Article 2 of the Protocol, for the words:

“Article 2H”

There shall be substituted:

“Articles 2H and 2J”

Article 2, paragraphs 8(a) and 11

In paragraphs 8(a) and 11 of Article 2 of the Protocol, for the words:

“Articles 2A to 2I”

There shall be substituted:

“Articles 2A to 2J”

Article 2, paragraph 9

The “and” at the end of subparagraph 9(a)(i) of Article 2 of the Protocol shall be moved to the end of subparagraph 9(a)(ii).

The following subparagraph shall be inserted after subparagraph 9(a)(ii) of Article 2 of the Protocol:

“(iii) Adjustments to the global warming potentials specified in Annexes C and F should be made and, if so, what the adjustments should be;”

Article 2J

The following Article shall be inserted after Article 2I of the Protocol:

“Article 2J: Hydrofluorocarbons

1. Each Party shall ensure that for the twelve-month period commencing on 1 January [2017], and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Annex F does not exceed, annually, [eighty-five] percent of the average of its calculated levels of consumption in [2011, 2012, and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. Each Party producing

one or more of these substances shall, for the same period, ensure that its calculated level of production of the substances does not exceed, annually, [eighty-five] percent of the average of calculated levels of production in [2011, 2012, and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten percent of the average of its calculated level of production in [2011, 2012, and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances.

2. Each Party shall ensure that for the twelve-month period commencing on 1 January [2021], and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Annex F does not exceed, annually, [sixty-five] percent of the average of its calculated levels of consumption in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. Each Party producing one or more of these substances shall, for the same period, ensure that its calculated level of production of the substances does not exceed, annually, [sixty-five] percent of the average of its calculated levels of consumption in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten percent of the average of its calculated levels of production in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances.

3. Each Party shall ensure that for the twelve-month period commencing on 1 January [2025], and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Annex F does not exceed, annually, [forty-five] percent of the average of its calculated levels of consumption in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. Each Party producing one or more of these substances shall, for the same period, ensure that its calculated level of production of the substances does not exceed, annually, [forty-five] percent of the average of its calculated levels of consumption in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten percent of the average of its calculated levels of production in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances.

4. Each Party shall ensure that for the twelve-month period commencing on 1 January [2029], and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Annex F does not exceed, annually, [twenty-five] percent of the average of its calculated levels of consumption in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. Each Party producing one or more of these substances shall, for the same period, ensure that its calculated level of production of the substances does not exceed, annually,

[twenty-five] percent of the average of its calculated levels of consumption in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten percent of the average of its calculated levels of production in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances.

5. Each Party shall ensure that for the twelve-month period commencing on 1 January [2033], and in each twelve-month period thereafter, its calculated level of consumption of the controlled substances in Annex F does not exceed, annually, [ten] percent of the average of its calculated levels of consumption in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. Each Party producing one or more of these substances shall, for the same period, ensure that its calculated level of production of the substances does not exceed, annually, [ten] percent of the average of its calculated levels of consumption in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances. However, in order to satisfy the basic domestic needs of the Parties operating under paragraph 1 of Article 5, its calculated level of production may exceed that limit by up to ten percent of the average of its calculated levels of production in [2011, 2012 and 2013] of Annex F, Group I plus ten percent of the baseline of Annex C, Group I controlled substances.

6. Each party shall ensure that for the twelve-month period commencing on January 1, 2017, and in each twelve-month period thereafter, its calculated level of production of Annex F, Group II controlled substances generated as a byproduct in each production line that manufactures Annex C, Group I or Annex F controlled substances shall not exceed [0.1] percent of the mass of Annex C, Group I substances or Annex F substances manufactured in that production line.

7. Each Party shall ensure that any destruction of Annex F, Group II controlled substances generated by facilities that produce Annex C, Group I controlled substances shall occur only by technologies to be approved by the Parties.

Article 3

In the preamble to Article 3 of the Protocol, for the words:

"2A to 2I"

There shall be substituted:

"2A to 2J"

In the preamble to Article 3 of the Protocol, for the words:

"Annex C or Annex E"

There shall be substituted:

"Annex C, Annex E or Annex F"

For the final semi-colon of subparagraph (a)(i) of Article 3 of the Protocol there shall be substituted:

“, except, for the purposes of Article 2J, by its global warming potential as specified in Annex C or Annex F;”

For the period at the end of subparagraph (c) of Article 3 of the Protocol there shall be substituted a semi-colon, and the "and" at the end of subparagraph (b) of Article 3 of the Protocol shall be moved to the end of subparagraph (c).

The following clause should be added to the end of Article 3 of the Protocol:

"(d) Emissions of Annex F, Group II controlled substances by adding together all emissions of such substances from facilities that produce Annex C, Group I or Annex F controlled substances. For facilities that produce Annex C, Group I or Annex F controlled substances, emissions shall equal the amount of Annex F, Group II controlled substances generated at the facility, including amounts emitted from equipment leaks, process vents, and destruction devices, but excluding amounts destroyed, stored on site for destruction, shipped off site for destruction, or sold for a subsequent use approved by the Parties."

Article 4, paragraph 1 sept.

The following paragraph shall be inserted after paragraph 1 *sex* of Article 4 of the Protocol:

"1 *sept.* Within one year of the date of entry into force of this paragraph, each Party shall ban the import of the controlled substances in Annex F from any State not party to this Protocol."

Article 4, paragraph 2 sept.

The following paragraph shall be inserted after paragraph 2 *sex* of Article 4 of the Protocol:

"2 *sept.* Within one year of the date of entry into force of this paragraph, each Party shall ban the export of the controlled substances in Annex F to any State not party to this Protocol."

Article 4, paragraphs 5, 6 and 7

In paragraphs 5, 6 and 7 of Article 4 of the Protocol, for the words:

"Annexes A, B, C and E"

There shall be substituted:

"Annexes A, B, C, E and F"

In paragraph 8 of Article 4 of the Protocol, for the words:

"Articles 2A to 2I"

There shall be substituted:

"Articles 2A to 2J"

Article 4B

The following paragraph shall be inserted after paragraph 2 of Article 4B of the Protocol:

"2 *bis.* Each Party shall, by 1 January 2017 or within three months of the date of entry into force of this paragraph for it, whichever is later, establish and implement a system for licensing the import and export of new, used, recycled and reclaimed controlled substances in Annex F. Any Party operating under paragraph 1 of Article 5 that decides it is not in a position to establish and implement such a system by 1 January 2017 may delay taking those actions until 1 January 2020."

Article 5, paragraph 4

In paragraph 4 of Article 5 of the Protocol, for the words:

"Articles 2A to 2I"

There shall be substituted:

"Articles 2A to 2J"

Article 5, paragraphs 5 and 6

In paragraphs 5 and 6 of Article 5 of the Protocol, for the words:

"Article 2I"

There shall be substituted:

"Articles 2I and 2J"

Article 5 paragraph 8 qua.

The following paragraph shall be inserted after paragraph 8 *ter.* of Article 5 of the Protocol:

"8 *qua.* Each Party operating under paragraph 1 of this Article shall:

(a) in order to meet its basic domestic needs, be entitled to delay its compliance:

(i) with the control measures set out in paragraph 1 of Article 2J for three years;

(ii) with the control measures set out in paragraph 2 of Article 2J for four years;

(iii) with the control measures set out in paragraph 3 of Article 2J for five years;

(iv) with the control measures set out in paragraph 4 of Article 2J for six years, and;

(v) with the control measures set out in paragraph 5 of Article 2J for seven years,

subject to any adjustments made to the control measures in Article 2J in accordance with Article 2(9);

(b) for purposes of calculating its consumption baseline under Article 2J, use the average of its calculated levels of consumption of Annex F, Group I controlled substances in [2015, 2016 and 2017] plus sixty-five percent of the baseline of Annex C, Group I controlled substances;

(c) for purposes of calculating its production baseline under Article 2J, use the average of its calculated levels of production of Annex F, Group I controlled substances in [2015, 2016 and 2017] plus sixty-five percent of the baseline of Annex C, Group I controlled substances.

Article 6

In Article 6 of the Protocol, for the words:

"Articles 2A to 2I"

There shall be substituted:

"Articles 2A to 2J"

Article 7, paragraphs 2, 3 and 3 ter.

In paragraph 2 of Article 7, the comma following the words "Annex E, for the year 1991" shall be removed and a semicolon shall be inserted.

The following line shall be inserted after the line that reads "— in Annex E, for the year 1991," in paragraph 2 of Article 7 of the Protocol:

"—in Annex F, for the years 2011, 2012 and 2013, except that Parties operating under paragraph 1 of Article 5 shall provide such data for the year 2015."

In paragraphs 2 and 3 of Article 7 of the Protocol, for the words:

"C and E"

There shall be substituted:

"C, E and F"

The following paragraph shall be added to Article 7 of the Protocol after paragraph 3 *bis*:

"3 *ter*. Each Party shall provide to the Secretariat statistical data of its annual emissions of Annex F, Group II controlled substances in accordance with Article 3(d) of the Protocol and the amount of Annex F, Group II controlled substances captured and destroyed by technologies to be approved by the Parties.

Article 10, paragraph 1

In Article 10, paragraph 1 of the Protocol, for the words:

"Articles 2A to 2E and Article 2I"

There shall be substituted:

"Articles 2A to 2E, Article 2I and Article 2J"

At the end of Article 10, paragraph 1 of the Protocol, following the sentence ending:

"incremental costs shall be decided by the meeting of the Parties"

There shall be added the following sentences:

"Where a Party operating under paragraph 1 of Article 5 chooses to avail itself of funding from any other financial mechanism to meet any part of its agreed incremental costs, that part shall not be met by the financial mechanism under Article 10 of this Protocol. Where a Party operating under paragraph 1 of Article 5 chooses to comply with the provisions of Article 2J in advance of the schedule agreed by the Parties, that Party shall be able to avail itself of the funding described in Article 10 of the Protocol for such early compliance."

At the end of Article 10, paragraph 1 of the Protocol, there shall be added the following:

"1 *bis*. The Parties shall strengthen the financial mechanism for providing financial and technical cooperation to Parties operating under paragraph 1 of Article 5 of this Protocol in order to promote energy efficiency and to overcome barriers to the uptake of technologies with low global warming potentials in order to implement the provisions of Article 2J and Article 5, paragraph 8 *qua*."

Article 17

In Article 17 of the Protocol, for the words:

"Articles 2A to 2I"

There shall be substituted:

"Articles 2A to 2J"

Annex C and Annex F

Annex C, Group I is amended to add the 100-year Global Warming Potential for the following substances:

<u>Substance</u>	<u>100-Year Global Warming Potential</u>
HCFC-21	151
HCFC-22	1,810
HCFC-123	77
HCFC-124	609
HCFC-141b	725
HCFC-142b	2,310
HCFC-225ca	122
HCFC-225cb	595

A new Annex F shall be added to the Protocol, following Annex E. It shall read:

Annex F: Controlled Substances

<u>Substance</u>	<u>100-Year Global Warming Potential</u>
<i>Group I</i>	
HFC-32	675
HFC-41	92
HFC-125	3,500
HFC-134	1,100
HFC-134a	1,430
HFC-143	353
HFC-143a	4,470
HFC-152	53
HFC-152a	124
HFC-161	12
HFC-227ea	3,220
HFC-236cb	1,340
HFC-236ea	1,370
HFC-236fa	9,810
HFC-245ca	693
HFC-245fa	1,030
HFC-365mfc	794
HFC-43-10mee	1,640
HFC-1234yf (HFO-1234yf)	4
HFC-1234ze (HFO-1234ze)	6
HFC-1336mzz (HFO-1336mzz)	9
<i>Group II</i>	
HFC-23	14,800

Section II: Relationship to the 1999 Amendment

No State or regional economic integration organization may deposit an instrument of ratification, acceptance or approval of or accession to this Amendment unless it has previously, or simultaneously, deposited such an instrument to the Amendment adopted at the Eleventh Meeting of the Parties in Beijing, 3 December 1999.

Section III: Relationship to the UNFCCC and Its Kyoto Protocol

This Amendment shall have no effect on the status of hydrofluorocarbons under the Kyoto Protocol, and will not except hydrofluorocarbons from the scope of the commitments contained in Articles 4 and 12 of the UNFCCC and in Articles 2, 5, 7 and 10 of its Kyoto Protocol that apply to "greenhouse gases not controlled by the Montreal Protocol." Each Party to this Amendment shall continue to apply the provisions of the UNFCCC and its Kyoto Protocol identified above to hydrofluorocarbons as long as those provisions, respectively, remain in force with respect to such Party.

Section IV: Entry into Force

1. Except as noted in paragraph 2, below, this Amendment shall enter into force on 1 January 2017, provided that at least twenty instruments of ratification, acceptance or approval of the Amendment have been deposited by States or regional economic integration organizations that are Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer. In the event that this condition has not been fulfilled by that date, the Amendment shall enter into force on the ninetieth day following the date on which it has been fulfilled.
2. The changes to Article 4 of the Protocol in Section I of this Amendment shall enter into force on 1 January 2017, provided that at least seventy instruments of ratification, acceptance or approval of the Amendment have been deposited by States or regional economic integration organizations that are Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer. In the event that this condition has not been fulfilled by that date, the Amendment shall enter into force on the ninetieth day following the date on which it has been fulfilled.
3. For purposes of paragraphs 1 and 2, any such instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by member States of such organization.
4. After the entry into force of this Amendment, as provided under paragraphs 1 and 2, it shall enter into force for any other Party to the Protocol on the ninetieth day following the date of deposit of its instrument of ratification, acceptance or approval.